

Remarks

With the entry of this Amendment, claims 1, 2, 4, 5 and 7-10 will be pending in this patent application. Claim 6 stands withdrawn from consideration under 37 CFR 1.142(b) as being drawn to a non-elected invention. In this Amendment, claims 1, 2, 4 and 5 have been amended, claim 3 has been canceled and claims 7-10 have been added. Support in the original disclosure for the subject matter recited in the new claims 7-10 is provided, for example, in the original claims in this application. No new matter has been introduced by amendments made herein.

Objections to Claims

The Examiner's objections to claims 3 and 5, stated on page 4 of the last Office Action are obviated by the cancellation of claim 3 and the amendment to claim 5, as shown in the Listing of Claims. The subject matter of canceled claim 3, now incorporated into claim 1, has been clarified in view of the Examiner's objection to claim 3.

Rejection

Claims 1-5 stand rejected under 35 USC 103(a) as being unpatentable over US 6494789 B2 (Chen) in view of US 2004/0042926 A1 (Shimizu). Applicant respectfully traverses this rejection insofar as it might be deemed applicable to any of claims 1, 2, 4, 5 and 7-10, as now presented.

Chen discloses a golf club head, which may be a wood-type club head, having at least a portion of the face thereof formed of martensitic steel alloy containing Ni, Cr, C and Si in weight percentages that satisfy the weight percentages for those elements recited in claims 1 and 7. The steel alloy used by Chen also contains Ti, Mo and P in weight percentages that *do not* satisfy the weight percentages for those elements recited in claims 1 and 7. Chen does not disclose the Mg as a constituent in the steel alloy used in the club head.

Shimizu discloses a stainless steel that can be used in cast golf club heads. One of the

essential constituents of the stainless steel, silicon, is present in amounts ranging from 2-5% by weight. Magnesium is disclosed as an optional additive component that is "effective in improving the hot workability of steel" and can be incorporated in the stainless steel in amounts not exceeding 0.01% by weight. (See paragraphs [0047], [0091] and [0101] of Shimizu.) Shimizu does not teach, as the Examiner asserts, that Mg is "*necessary* in low % weights only" (emphasis added). As disclosed in paragraph [0123] of Shimizu, only a "slight proportion" of the stainless steel structure is to be martensite.

The Examiner acknowledges the deficiencies of the Chen disclosure vis-à-vis the requirements of applicant's claims. As a remedy for these deficiencies, the Examiner proposes a modification of the Chen alloy that incorporates magnesium, citing the use of magnesium in the stainless steel disclosed by Shimizu as the motivation for making the proposed modification.

Applicant can find no disclosure in either of the Chen or Shimizu documents that supports the modification of Chen's alloy as proposed by the Examiner. There is, for example, no suggestion in Chen that magnesium would be beneficial in the disclosed alloy. While Shimizu discloses a high-silicon stainless steel alloy that may incorporate magnesium, there is no evidence suggesting that magnesium might be beneficial in an alloy, such as Chen's, that has a martensitic structure and a significantly lower percentage of silicon.

If the modification of Chen's alloy proposed by the Examiner were made, the resulting metal would not satisfy the requirements for weight percentages of the constituent elements recited in Applicant's independent claims 1 and 7. In particular, the resulting alloy would have a significantly lower percentage of Ti and a significantly higher percentage of Mo. The Examiner states that "the claimed dimensions are not considered critical, even considering applicant's explanations in the specification for the claimed % weight of elements" (sic). Here, the Examiner is apparently taking official notice of facts not in the record. In the description of the invention, Applicant has identified advantages resulting from the claimed weight percentages. Applicant submits that the claimed weight percentages are not common knowledge or well-known in the art and challenges the position taken by the Examiner. Under the guidelines stated in MPEP 2144.03

C, Applicant respectfully submits that the Examiner is now obligated to identify evidence or authority supporting his position.

In view of the foregoing observations and arguments, Applicant respectfully submits that the Chen and Shimizu documents cannot properly serve as a basis for rejecting independent claims 1 or 7 or dependent claims 2, 4, 5 and 8-10. Accordingly, Applicant respectfully requests that claims 1, 2, 4, 5 and 7-10 be recognized as allowable.

The allowability of the independent claims inheres, of course, in the dependent claims. In addition, the dependent claim are separately allowable due to limitations that they recite. For example, there are no disclosures in the prior art of record that satisfy or make obvious the Ni-to-Ti ratio recited in claim 2.

Other Prior Art

Applicant has considered the other prior art cited by the Examiner. This prior art was applied against the claims in this application and does not warrant further comment.

Conclusion

In view of the amendments and remarks presented in this paper, Applicant respectfully submits that the Examiner withdraw the rejection stated in the last Office Action and recognize all of the pending claims as allowable.

If unresolved matters remain in this application, the Examiner is invited to contact Frederick R. Handren at the telephone number provided below, so that a resolution of these matters can be effected.

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Respectfully submitted,

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